Challenges of matrix support as educational practice: mental health in primary healthcare

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This study investigated the educational dimension of matrix support practices for mental health within primary care. Using an interpretative–explanatory qualitative approach, professionals involved in matrix support for mental health in a municipality in the state of São Paulo, Brazil, were interviewed. The data were compared with matrix support frameworks with two pedagogical trends: directive and constructivist. The analysis on this content was incorporated with the interviews and two themes could be identified: “matrix supporter’s profile”, and “challenges for construction of matrix supporter’s practice.” The subjects’ perceptions regarding supporters’ competence profiles were coherent with matrix support assumptions, whereas their educational practices related mainly to the directive trend. The challenge of implementing constructivist practice was only partially recognized, since this requires a critical and transformative stance regarding the hegemonic educational practices within healthcare.

Keywords: Mental health. Primary healthcare. Educational models. Support for human resources development. Assessment of healthcare needs.
Matrix support practices

The matrix support proposals in mental health originated from the fact that primary care needed to incorporate knowledge and practices of the mental health specialties (Dimenstein et al.1). According to Campos et al.2, matrix support is, at the same time, an organizational arrangement and a work methodology, and it aims to offer assistance backup and technical-pedagogical support to the reference teams, which are responsible for a generalist approach to the care provided for users.

Cunha et al.3 refer to matrix support as the development of the capacity of dialog between the objectives of each discipline and the therapeutic proposal of intersections between diagnoses and treatments. Based on the construction of communication spaces and clinical and sanitary guidelines, matrix support creates close bonds between specialists and reference teams, which, in a shared way, become responsible for the care provided for a given population’s health needs (Martins Junior4).

Fostering the exchange of knowledge between reference teams and specialist professionals, matrix support is grounded in the idea that no specialist in isolation will be able to ensure a comprehensive approach to health. The need to articulate each professional category’s specificity in the promotion of comprehensive care is associated with the “intertwining” between network services and social equipment to guarantee continuity of care (Nunes5; Dimenstein et al.; Amorim6; Domitti7).

However, matrix support practices involving primary care teams and users have started to gain space only in recent publications, by means of the proposal for the reorganization of the teamwork process (Morais et al.8; Santos et al.9); of the potentiality to enlarge the professionals’ view and improve care practices (Schatschineider10); and of the challenges to be faced (Morais et al.8; Vasconcelos et al.11; Minozzo et al.12).

International experiences have endorsed the need to pay attention to the fragmentation of health care. Despite the different terminologies, they have also defended the reorganization of work and of the relationships between specialists and generalists through devices that promote the interaction of distinct practices (Kotter13; Kimberley14; Gask15; NHS16).

In Brazil, the establishment of Núcleos de Apoio à Saúde da Família (NASF – Family Health Support Nuclei) has favored the reorganization of specialists in the Family Health Teams17. In a technical publication, the Ministry of Health has determined that the matrix support teams have two types of responsibilities: towards the population and towards the primary care team. In addition, it offers
indicators to assess the result of these actions.\(^{18}\)

Brazilian experiences concerning the matrix support proposal have been developed by means of the reorganization of work between specialties and primary care, aiming at the provision of comprehensive care. Nevertheless, professionals can put this proposal into practice through distinct forms (Franco et al.\(^{19}\); Hubner et al.\(^{20}\); Baduy\(^{21}\); Dimenstein et al\(^{1}\)).

Ballarin et al.\(^{22}\) argue that dialog spaces are opportunities to learn and exchange knowledge horizontally. They propose to analyze matrix support by means of four dimensions and stress the pedagogical one. Following this path, the educational dimension of the supporters' practice can be considered any action that involves interaction and knowledge share, and not only classic pedagogical activities.

According to Libâneo\(^{23}\), the way in which educators work, either selecting and organizing content or choosing a teaching and evaluation approach, is directly linked to their educational presuppositions. These reflect the understanding of how people interact and learn. Therefore, it is possible to conclude that knowledge about these presuppositions can subsidize the way in which matrix support is operated in its educational dimension.

This study focuses exactly on the educational dimension of matrix support practices in mental health in the scope of primary care, and aims to amplify the understanding of the elements that make it viable. With the purpose of contributing to enhance the employment of this device, the interaction between specialists and primary care professionals is highlighted by means of knowledge exchange and in the promotion of comprehensive care.

**Characterization of the scenario**

The study investigates the health services network in a municipality located in the interior of the State of São Paulo, which was chosen due to its pioneering adhesion to the Psychiatric Reform process and to its historical intertwining between primary care and mental health, which has been fostered by the matrix support device (Figueiredo et al.\(^{24}\)).

During the research, it was found that the local health care network was structured in five districts, and the municipality was a regional reference center. The districts had psychosocial care centers (CAPs III) and mental health teams in primary care, and the municipality had a NASF that was
responsible for three health centers.

The CAPs III and mental health teams in primary care worked together with the health centers, practicing a matrix support model in the construction of knowledge exchange moments among the professionals from the services involved in the provided care. The services that adopted this model have produced singular ways of operationalizing knowledge exchange, promotion of bonds, and joint responsibility.

**Methodological path**

The research, approved by the Research Ethics Committee of the Federal University of São Carlos, opinion no. 20970/2012, was a study oriented to a specific problem, whose methodological design was defined according to the qualitative and constructivist approach. Based on the principle that reality is apprehended differently by the subjects, this singularity can be mediated by the values, emotions and sociocultural repertoires brought by the subjects in confrontation with reality (Bulmer\(^2\); Guba et al.\(^2\); Minayo\(^2\)).

With the selection of the problem to be investigated, the proposed study was of the interpretive-explanatory type, so that it was possible to construct a comprehensive frame of a given phenomenon, based on the perspectives of the subjects involved, and trying to identify how these perspectives influence its production (Navarrete et al.\(^2\)).

Semi-structured interviews were used because they enable the emergence of many narratives and interpretations\(^2\), which were recorded in audio and, subsequently, transcribed for analysis. The selected participants were eighteen health professionals included in the mental health network, in the management and/or care sphere, and connected with matrix support. Six regional mental health supporters and the coordinator of the area were chosen in order to characterize the matrix support practices in the municipality.

The regional supporters are professionals allocated in health districts, usually psychologists and occupational therapists. Their functional is managerial and is targeted at intra and intersectoral articulation, with the purpose of consolidating mental health care in the municipality. Considering the ten professionals in this function, we requested that those who accepted to participate in the study addressed the diversity of the five health districts.
Based on the testimonies, inclusion criteria were identified for the selection of services that used the matrix support device. Four of them were developed to recognize the districts with more structured matrix support practices in mental health: (i) regular case discussions, jointly with professionals from the health centers; (ii) establishment of shared interventions with the health center teams, based on the case discussions; (iii) identification of the teams’ learning needs; and (iv) promotion of reflections on the practice.

The application of these criteria led to the selection of two health districts. Due to the fact that the matrix support work was still incipient in the NASF at the time the research was conducted, this team was excluded from the sample, which was circumscribed to the CAPs and to the mental health teams in primary care. Thus, eleven professionals, five from the CAPs and six from the mental health teams in primary care, were indicated as having matrix support practices aligned with the inclusion criteria.

In the case of the CAPs, each team collectively indicated one professional and, in the case of the mental health teams, the interviewed regional supporters indicated the matrix supporters whose practices were aligned with the stipulated criteria. The list of indicated professionals was randomly organized for the interviews. Finally, a saturation criterion was used to establish the sufficiency of the utilized sample, which resulted in three professionals per district.

The thematic modality of content analysis was applied to the interpretation of the interviews (Bardin\textsuperscript{29}). According to this communication analysis technique, the presence and frequency of discourses and words, as much as their absence, are relevant. After the testimonies were obtained, similar ideas were grouped into meaning nuclei and these, into themes. This set was the basis for the interpretation of the presented ideas through the application of the above-mentioned conceptual references\textsuperscript{27-29}.

For the analysis of the educational dimension of the matrix supporter’s practice, we used an adaptation (Table 1) of the classifications proposed by many authors who study the area of education (Libâneo\textsuperscript{23}; Santos\textsuperscript{30}; Gauthier et al.\textsuperscript{31}; Becker\textsuperscript{32}). The trend called liberal or traditional\textsuperscript{23} includes a set of pedagogical approaches – traditional, renewed progressive, renewed non-directive and technicist pedagogies – that correspond to the directive pedagogy\textsuperscript{32}. Likewise, the trend called progressive\textsuperscript{23} – libertarian, liberating and critical–social pedagogy of contents – corresponds to the relational or
constructivist pedagogy\textsuperscript{32}.

Table 1 Macro pedagogical trends according to the role of knowledge, of the professional and of the educator.

<table>
<thead>
<tr>
<th>TREND</th>
<th>KNOWLEDGE/OBJECT</th>
<th>PROFESSIONAL/SUBJECT</th>
<th>EDUCATOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional or Directive</td>
<td>Objective and abstract, organized according to a logical sequence</td>
<td>Passive; must assimilate the transmitted contents in order to be shaped and educated</td>
<td>Active, transmitter of contents, authority, the model to be imitated in a verticalized relation</td>
</tr>
<tr>
<td>New or Constructivist</td>
<td>Includes subjectivity, the professionals’ context and needs, extracted from practice with critical awareness</td>
<td>Active, the center of action, with needs and interests, the subject of learning</td>
<td>Guides, advises, directs, encourages knowledge acquisition by means of a horizontal relationship</td>
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Matrix support has a conceptual affinity with the progressive or constructivist pedagogy, as it is grounded in the critical analysis of realities and implicitly supports the active and social–political bias of education. This line considers experience as the basis of the educational relationship within pedagogical self–management.

**Results and discussion**

The analysis of the content of the interviews revealed two basic themes: (i) “the profile of the matrix supporter” and (ii) “challenges to the construction of the matrix supporter’s practice”.

(i) **The profile of the matrix supporter**

The “profile of the matrix supporter” presented three meaning nuclei: “matrix supporter’s attitudes”, “matrix supporter’s knowledge” and “matrix supporter’s skills”. These results were related to
the capacities that were considered necessary for a competent practice.

According to Hager et al.\textsuperscript{33}, the capacities can also be called attributes or resources and are categorized as: attitudinal or affective; cognitive or knowledge–related; psychomotor or skills. The articulation of these attributes in view of a problem of the professional reality supports a certain practice. Competence, however, is expressed only when these capacities are put into action and, depending on the context, generate results of excellence (Lima\textsuperscript{34}).

**Meaning nucleus: Matrix supporter’s attitudes**

Availability and openness were highlighted, in the sense of being available and offering, actively, opportunities to share experiences in the follow–up of the cases that were treated jointly with primary care, as it can be seen in the testimony below:

“I feel that it’s related to availability, to being open for the encounter, to doing together, being available, getting the phone, producing a confidence relationship... an active availability, not that availability of ‘you can call me’; that case is ours” (Regional supporter 4).

Flexibility, empathy, sheltering and commitment are also included in the list of attitudinal capacities of this practice, as well as the capacity of receiving criticisms and listening. Through this bias, the supporters argued that these attributes should be supported by the acceptance of the other as legitimate. In fact, and according to Maturana\textsuperscript{35}, when we accept the other, we can control pre–concepts and establish a relationship based on respect.

To other interviewees, the supporter should be a specialist who puts his/her knowledge in the service of the enhancement of the team’s capacities, and, at the same time, values diversity and stimulates creation. Campos\textsuperscript{36} argues that the supporter must have an interactive posture that provides subjects with conditions to reflect critically on their practice.

Thus, in light of the educational dimension of the encounter among subjects, Freire\textsuperscript{37} joins education to the opportunity of knowledge construction, in which the educator must be available to what is new and to the other. Respect to each person’s autonomy and worldview is considered an ethical
imperative that enables a relationship in which everybody participates actively.

From the notion of dialog as interaction among distinct points of view of knowledge, Morin\textsuperscript{38} considers the specificities and differences of each element in a recurrent and complementary relation that is instituted, for example, between educator and student; specialist and generalist; mental health and primary care; discipline and interdisciplinarity. Thus, relations that appear to be contradictory can be understood as complementary.

**Meaning nucleus: Matrix supporter’s knowledge**

Mastering the knowledge referring to matrix support, to the territory and to the municipality’s health care network, as well as to collective and mental health, were also mentioned as capacities of the supporter:

“I think that one of the objectives is to get out of the clinic, of the nucleus, [...] he’s there as a mental health worker who will attempt to promote a more qualified discussion about what health care is, with the bias of mental health, but thinking about the subject’s integral health” (Regional supporter 2).

To Campos\textsuperscript{39}, the nucleus dimension in professional work is constituted of knowledge and attributions that are specific to each profession or specialty. The author, based on Pierre Bourdieu’s concept of field, attributes to health work a dimension of action field: the field translates a situational notion and indicates the set of knowledge and tasks, outside the professional nucleus, that complements practice. In fact, it represents an enlargement of the specific identity – given by the nucleus – towards interdisciplinarity and interprofessionality, characteristics that are intrinsic to the area of health.

By reorganizing the relation between specialists and primary care, matrix support aims to face work fragmentation which, to some extent, reproduces the tight separation of disciplines in the scope of professional education (Feuerwerker\textsuperscript{40}), in the health services, and in the scope of care (Merhy et al\textsuperscript{41}; Campos et al.\textsuperscript{2}). Putting the specialists’ knowledge in the service of primary care teams through the joint discussion of cases and the handling of concrete situations offers clear advantages to practice, as it qualifies the care that is provided, strengthens bonds, and amplifies accountability and users’ likelihood
to adhere to the proposed treatments (Cunha42).

In this sense, the discourse of matrix and regional supporters was similar, as they defended that professionals must look in a comprehensive way at people who are receiving care, extending their action beyond mental health. Part of them believes that the specialist’s knowledge adds value to the discussion of cases and to care projects when it circulates horizontally and enables that all professionals, specialists or not, contribute to health work.

The need to break with the idea of the supporter as someone who prescribes interventions proved to be directly proportional to the need of constructing shared care plans:

“When I see the intervention of the community agent, in my next practices I’ll include this in my list of tools. I’ll have this knowledge, I’ll legitimate this and the contrary, too, [...] it means getting together and talking, seeing what went right and what went wrong” (Matrix supporter 6).

**Meaning nucleus: Matrix supporter’s skills**

Concerning the supporter’s skills, translated as knowledge of some devices, case discussion emerged as the main tool. The professionals highlighted the importance of transferring the constructed knowledge to other situations as a way of supporting teams’ autonomy.

“Because in the majority of the cases, it is ‘the case in itself’, which is interesting, solves a large part of the problems, but does not increase much the teams’ power of autonomy” (Regional supporter 4).

The discussions of clinical cases in matrix support also emerge from national and international experiences in the scientific literature19-20-15-16. The reading of a concrete reality to be analyzed, and in which one wishes to intervene, allows the establishment of different relations between facts and objects and offers greater possibilities of active transformation of reality37. In matrix support, the capacity of observing and critically analyzing the object/practice allows to reconstruct knowledge that can be used in different situations (Mitre et al41; Batista et al44).
The concept of transfer of learning, outlined by Bransford, Brown and Cocking (p.82), considers that “transfer is affected by the degree to which people learn with understanding rather than merely memorize sets of facts or follow a fixed set of procedures”. Therefore, the reference team could have more autonomy to use the knowledge and experiences acquired by the group in a given case.

Other matrix supporters argued that the clinical case should value the subject’s context and the teams’ action. The theory emerges to be approached based on the cases, and it is used to solve the subject’s needs, and to amplify the team’s understanding of the phenomena in question:

“I particularly think that this makes much more sense, because they saw the case, they felt the case under their skin, so they get much more interested than if we say: I have a case of alcohol and drugs and we'll explain what each drug is” (Matrix supporter 5).

Reflection, after the actions were performed, was reported as being part of case discussion, in order to analyze the strategies used and build a line of reasoning. Moments like this would provide the opportunity to learn with the mistakes and to consolidate achievements. In the three meaning nuclei of the profile, we observed coherence between the capacities that the supporters considered necessary to matrix support and the objectives of this practice. Although the set of capacities is closer to the constructivist educational trends, its presence in the knowledge sharing process revealed distinct conceptions about the roles of professionals and educators in the practice. These distinctions were grouped into a second theme and represent challenges to the matrix support practice.

(ii) Challenges to the construction of the matrix supporter’s practice

In this theme, the meaning nuclei revolved around the “fragilities” and “obstacles” that hinder the transformation of the matrix supporter’s intentions into actions.

Meaning nucleus: Fragilities in the matrix supporter’s practice

Concerning fragilities, the absence of discussions about the educational dimension in the
education of specialists and reference team professionals was the most cited one. According to the testimonies, this is the origin of difficulties in conducting the discussions, as feelings of dispute and confusion are awakened in the supporters in relation to their role.

“It's not something smooth neither to mental health, nor to a large part of the workers. No one had this in their education process [...] There is a certain mystique, as people fear to go there and fail to know what to say. This is very interesting. So, the CAPs says, “If I go there and the matter is children, I won't know what to say”. So, it's as if he had to go there and have a ready answer” (Ar. 1).

Still regarding practice, some interviewees considered the supporter as someone who should transmit knowledge, select the cases previously and prepare the contents for discussion, independently of the specific context. This is an indication of the close contact between the supporter’s educational practice and the presuppositions of the liberal or directive pedagogy, as the supporter is perceived as a transmitter of knowledge without context, in the form of generic themes that are considered relevant. In these situations, the professional becomes a passive receptor who must apprehend the procedures in order to repeat them30-31-32.

According to Libâneo23, liberal pedagogy, as a typical manifestation of the class society of the capitalist system, defends the predominance of freedom and of individual interests in society. In the last 50 years, Brazilian education has presented clearly liberal tendencies, which have been intensified mainly in the pedagogical level when the roles of educators and professionals are consolidated in knowledge construction.

This pedagogical approach and the many examples of practices reported by the interviewees illustrate the effective mismatch, in the matrix support action, of the objectives that were pointed to the supporter’s profile. This gap configures an ambiguity in the practices, which sometimes are close to the desired profile, and sometimes are distant. This tension has been portrayed by some supporters who, in the absence of a critical reflection on their activities, could not realize that this way of organizing matrix support puts obstacles to the autonomy and development of the reference teams.
Meaning nucleus: Obstacles to the matrix supporter’s practice

The interviewees who identified a gap between intention and action in the matrix support practices attributed it to the characteristics of their education and to the lack of permanent education processes for health professionals. The organization of the working process was also identified as an obstacle, as the lack of primary care professionals plays a preponderant role in the construction of the specialist’s unidirectional action, especially in emergencies.

The frequency of emergencies is a factor that reiterates the overvaluation of the specialist to the detriment of the interaction among other professionals’ knowledge: in crises, there is a tendency of viewing the specialist as the predominant professional. Thus, the reference team is reduced to a mere observer of the specialist’s action and only reproduces the knowledge of the specialist who deals with the situations.

“[…] in some of the cases, you go there to listen and you have to give an answer immediately, but I think only supervisors with an extraordinary view can do this and are able to give an answer; many times, a ready answer” (Matrix supporter 1).

At the same time, some interviewees reported that matrix support should also be approached as a specialization:

“because being a psychologist or an occupational therapist in primary care in this perspective of matrix support, we can’t say we learned this at university. There are things that are much more connected with it: Which strategy do I use now to try to sensitize the team?, which is different from Which strategy do I use to deal with the patient z or y? (Matrix supporter 5).

To face the challenge of improving the education of health professionals, the current Diretrizes Curriculares Nacionais (DCN – National Curriculum Guidelines) for the curricula of undergraduate health programs contain the amplification of the concept of health, recommend education in real contexts, and include the dimensions of management and education in the profile, beyond health care⁴⁶. The Sanitary Reform had already revealed the need to change the professionals’ education in order to guide it
towards a profile that is generalist, reflective and committed to the principles of Brazil’s National Healthcare System (SUS)\textsuperscript{47}.

Although the Ministries of Health and Education have instituted diverse initiatives targeted at the implementation of the DCN and at the teaching–service articulation, this challenge is still far from being fully tackled\textsuperscript{40}. As a result, Permanent Education, instituted as a national policy in 2004, emerges as a possibility of development of new capacities, supported by the reflection on the daily routine of the work. The conception of Permanent Education brought by the policy aims at:

“the transformation of the educational processes, of the pedagogical and health practices, and at the organization of the services, in an combined work between the health system, in its various management spheres, and the educational institutions”\textsuperscript{48}.

Based on these results, it was evident that the challenges to the construction of the matrix support practice are related to the recognition of the systems of values and meanings that ground the education and the organization of the working process in the area of health, with the purpose of giving an answer to the fragilities and obstacles to a comprehensive practice of care.

Final remarks

In the current context of the health services, matrix support has become an important tool to include specialists in primary care, as this model demands new capacities from health professionals beyond the clinical work. Due to this, we believe that the educational dimension must be present in the work of matrix supporters through the articulation between an assistance backup and technical–pedagogical support, as both axes are permeated by educational relations and involve interactions among professionals with distinct backgrounds.

The analysis of how knowledge circulates between specialists and reference teams in the testimonies allowed us to conclude that there is a distance between intention and action in the different forms of conducting matrix support. In the examples of matrix support reported here, it was possible to notice a strong presence of liberal or traditional principles, as knowledge transmission was seen as the
way in which people acquire knowledge. To some professionals, the recognition of the need to work in a
dialogic way emerged as tension and desire, which revealed the lack of pedagogical tools so that they
can act differently from the practice that was shown.

Although with lower frequency, the constructivist educational practices that were cited in some
testimonies understood education as a social, shared and committed act: an exchange among people
who question the mere accumulation of information. The work of the specialists, whose practices found
greater support on progressive pedagogical conceptions, was fundamentally guided towards knowledge
transformation through the construction of meanings and through the possibility of transforming care.

After we recognized the educational dimension in the matrix support practices and the tensions
and limitations brought by traditional education experiences, we identified the potential value of
experiences that are aligned with a progressive education that has a dialogic approach both to
education and to in-service training. The constructivist trend, in the matrix support practices, gives
autonomy to the reference teams, makes they become the protagonists of care projects, and offers a
new repertoire of action to the supporters. The dialogic posture proved to be the main way to reach a
path that is more coherent with a practice based on democratic, participative and inclusive principles.

Managers and health professionals involved in in-service training practices are particularly
relevant audiences for the results of this study. In fact, facing the inertia that derives from the traditional
pedagogical trend requires a critical and active posture in relation to hegemonic practices in
undergraduate and postgraduate health programs.

**Collaborators**

The authors worked together in all the stages of the production of the manuscript.

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